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**Environmental
Cleanup Office**

**Environmental
Resources
Management**

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12 June 2009

Ms. Claire Hong
Remedial Project Manager
U.S. Environmental Protection Agency, Region 10
Office of Cleanup, ECL-111
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140



Subject: Comments on EPA's 4-08 Site History
Glacier Westside Document
5900 West Marginal Way SW, Seattle, Washington
King County Parcel Number: 1924049029

Dear Ms. Hong:

ERM-West, Inc. (ERM) is submitting this letter on behalf of Reichhold, Inc. (Reichhold) and Glacier Northwest, Inc. (Glacier Northwest) (together the Potentially Liable Parties [PLPs]) to provide comments and clarifications on the United States Environmental Protection Agency's (EPA's) site history document for the property located at 5900 West Marginal Way SW in Seattle, Washington (the "site"). The site history document is dated 14 April 2008 and referred to as the "4-08 Site History Glacier Westside" document (Glacier Site History). ERM understands this document was compiled based on 104(e) Request for Information responses from Reichhold and Glacier, as well as other information sources, and redacted for the Washington State Department of Ecology (Ecology) use. The Glacier Site History was provided to Glacier Northwest and Reichhold by Ecology as part of Agreed Order negotiations under the Washington State Model Toxics Cleanup Act (MTCA).

In a telephone conversation with Mr. Jonathan Maas of EPA on 4 June 2009, he indicated the preferred method of providing comments on the Glacier Site History was via a letter presenting our comments. This comment letter has been prepared and is being respectfully submitted per that request. Both Reichhold and Glacier Northwest appreciate the opportunity to provide these comments and clarifications. It should be noted that comments are only provided on those issues considered to be significant by the PLPs.

USEPA SF



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Comments and clarifications are provided below by section headings used in the Glacier Site History. Proposed inserted clarifying text is provided in italics. Select sources are provided as appendices as noted.

Site Location and Description

1. Second paragraph, first sentence: "The site was not significantly impact by the development of the Waterway *until about 1970 when the Port of Seattle's Terminal 115 was constructed which changed the southern shoreline and created what is now referred to as Glacier Bay.*" [Source: Aerial photographs dated 1967, 1969, and 1974 – Attachment A]
2. Third (last) paragraph, first sentence: The site is incorrectly stated to have a cement plant. Cement has never been produced at this site. This facility has always been used as a distribution facility only where cement is brought to the site by ship, barge or occasionally rail, unloaded into the ten terminals on site for sale and distribution to cement tanker trucks or rail. The following clarifying language is proposed: "The property contains a cement *terminal consisting of cement storage silos, a cement conveyance system, railhead for transfer of bulk cement, and warehouses used for storage, light truck maintenance and offices.*" [Source: Glacier Northwest, Inc.]

Current Property Use

3. First sentence: the correct property address is 5900 W. Marginal Way SW.

Historical Operations

1930s:

4. Proposed new insert for 1930s history: "*King County owned the property from 1930 to 1943 as a result of an earlier tax foreclosing proceeding.*" [Source: Letter from Stephen Perrigo (Parametrix) to John Dohrman (Port of Seattle) re: Site History Summary, dated 22 January 1985; *Reichhold Chemical/Lone Star Cement Scope of Work* (Ecology, 1990)]

1940s:

5. First paragraph: The Carlisle Lumber Company owned the property *for a period in 1943 and operated a lumber plant.* The Department of Army... *Between 1943 and 1946, the Crown Zellerback Corp., Charcoal Division operated a facility on behalf of the government that manufactured activated charcoal and whetlerite filters for gas masks.* [Source: These dates have been described as 1943 to 1947 in other Ecology reports. 1946 appears to be a more appropriate

end date given that Reichhold Chemical, Inc. signed its lease in December 1946.]

6. Second paragraph, last sentence: The following sentence is a more accurate description of the chemicals produced at the site: *Pentachlorophenol was made by using phenol and chlorine; sodium pentachlorophenate was made using pentachlorophenol and sodium hydroxide.* [Source: Reichhold, Inc.]
7. Last paragraph, last sentence: Need to clarify that ammonia was used in the former US Army whetlerite filters process, not Reichhold process operations. [Source: letter from Department of the Army to USEPA, 19 October 1987]

1950s:

8. First three paragraphs: The information presented for the 1950s timeframe is difficult to follow, and contains some statements that are inaccurate or based on conjecture. The following paragraphs are proposed to replace the original first three paragraphs:

"In December 1952, Reichhold Chemical had constructed a stormwater drainage ditch from the back portion of their property to the Duwamish River. On December 24, about 8,000 gallons of formaldehyde was released into the ditch, causing observed fish kills. The Pollution Control Commission contacted the facility and was advised that it was an accident. It was at this time, the Commission became aware that the plant was making formaldehyde.

In 1953, following the December 1952 fish kill, the Pollution Control Commission determined that changes to the Reichhold plant involving the development of a new process for making formaldehyde was a contributing cause to the loss of formaldehyde from the Reichhold plant to the Duwamish Waterway. The Pollution Control Commission determined that a recurrence was not expected. [Source: 1953 memo from W. Bergerson of the Pollution Control Commission stating that Reichhold had developed a new process for making formaldehyde - not that it had changed its process to begin making formaldehyde - Attachment B]

A fish kill occurred on April 28, 1953 and was reported to the Pollution Control Commission by State Game Department. The Game Department also reported they had received complaints about a green-colored effluent in the River coming from a sanitary sewer outfall near the Reichhold facility."

9. Fourth paragraph: This paragraph contains a few unsubstantiated statements about the containment areas, wastewater impoundment, and water treatment tank. The following clarifying language is proposed: *"Between 1955 and 1956 changes were made to the waste handling system to reduce the potential for spilled material to reach the waterway and reduce the concentrations of wastewater discharges. These changes included rerouting of several wastewater streams (wash water produced from the clean out of the resin reactor kettles, cooling water from the formaldehyde and pentachlorophenol process, and drainage from the tank farm area sumps) to two (2)-20,000 gallon wooden treatment tanks and the impounding basin with subsequent discharge to the waterway via an outfall. The first pentapentachlorophenol pilot plant was located..."* [Source: Reichhold, Inc.]
10. Fifth paragraph: The information from the Washington State Pollution Control Commission's report "An Investigation of Pollution in the Green-Duwamish River: (Summer 1955) appears to be misrepresented in the second sentence. The report actually states, *"Toxic elements in the liquid waste consist of phenols and pentachlorophenols. During the summer of 1955, live box experiments conducted by the Department of Fisheries revealed highly toxic conditions existing in the vicinity of the outfall sewers on several occasions."* [Source: Washington State Pollution Control Commission's report "An Investigation of Pollution in the Green-Duwamish River" (Summer 1955)]
11. Fifth paragraph, second to last sentence: This sentence, including the text within the parenthetical, is not correct and should be removed. These statements, as well as the reference to temporary settling basins, restate the error found in the 1985 Harper Owes Report (*Duwamish Ground Water Studies, Waste Disposal Practices and, Dredge and Fill History*, Harper-Owes, March 1985) that was based on the EPA's 1982 Aerial Photographic Analysis (*Aerial Photographic Analysis of Hazardous Waste Sites, Duwamish Valley, Washington*, USEPA, June 1982) that mistakenly analyzed the Port's Terminal 115 property as the Reichhold Property. The temporary settling basins shown in these aerial photos are located on the Terminal 115 property and apparently relate to MRI's tin reclamation activities. Dan Cargill with the Department of Ecology has acknowledged this error. [Source: Letter from Dan Cargill to M. Anderson re: Reichhold Chemical Site (Ecology 1988) – Attachment C]
12. Fifth paragraph, last sentence: This sentence is inaccurate and should be replaced with the following language: *"Beginning in approximately 1955 through 1958, all operations at the Seattle pilot site was dismantled by Reichhold."* [Source: Phase II Site Assessment (Parametrix, 1990)]
13. Last paragraph: It should be stated that the "location of the impoundment in the northeast portion of the Kaiser Sale Property," as opposed to the current property. Further, as shown in Figure 4 of the Parametrix report, the location

of this pit or impoundment area on the Kaiser Sale Property corresponds with the location of Reichhold's impoundment basin. [Source: *Kaiser Property Environmental Audit* (Parametrix, 1985)]

1960s:

14. First paragraph: Propose inserting as first sentence: *"Between 1958 and 1961, Reichhold used the property for offices and laboratory procedures only."* Also, the property was not used between 1961 and 1964, not 1960 and 1964 as indicated. [Source: Memo from the Pollution Control Commission, 27 September 1961]
15. Third paragraph: Please provide the reference or source for the statement regarding the presence and construction materials of the three ten-inch storm sewers and the ten-inch outfall.
16. Fifth paragraph: Additional information: *"The redevelopment included construction of silo structures for cement storage, truck receiving and loading areas, offices, a marine dock, and a conveyor gallery for trans-shipment of cement materials from barges to the upland storage areas."* [Source: *Reichhold Chemical/Lone Star Cement Scope of Work* (Ecology, 1990)]
17. Last paragraph: Kaiser Cement continued operations of the cement terminal until 1987. [Source: Letter from Hart Crowser, 1985]

1970s:

18. 1970s history, first paragraph, last three sentences: These sentences incorrectly state the information presented in the Parametrix report. The following clarifying language is proposed: *"The 1985 Parametrix report indicates that in 1974 a pit was located in the southeast corner of the property. Parametrix indicates that the pit was used by Kaiser for disposal of waste sand, gravel, and cement slurries from the Kaiser facility to the north. Kaiser also leased this property to several tenants as a storage yard for containers and to Parsons for the construction of modular buildings."* [Source: *Kaiser Property Environmental Audit* (Parametrix, 1985)]

1980s:

19. 1980s history, first paragraph: Propose inserting as first sentence: *"Aerial photographs from 1984 show that an area approximately 5 acres in size was re-graded and filled at the south and southwest portions of the site. In 1985, the site was a hard surface graveled parking area used for the storage of shipping containers."* [Source: *Lower Duwamish Waterway Source Control Action Plan for Glacier Bay Source Control Area (SCAP)*, Ecology, 2007]

20. Ash Grove leased the facility from Lone Star Industries, but there is no information that they operated on behalf of Lone Star Industries.

2000s:

21. 2000s history, first paragraph: In 2000, Lone Star Northwest changed its name to Glacier Northwest. [Source: Glacier Northwest]

Regulatory History

A. Complaints, Permits and Notifications

22. First paragraph, second sentence: Reichhold Chemical was located *south* of Duwamish Shipyards, not north as indicated.
23. Third paragraph, second sentence: Proposed clarifying language: "...who noted that a green colored effluent from *a sanitary sewer outfall in the vicinity of the Reichhold plant* was also seen."
24. Fifth paragraph, second sentence: Proposed clarifying language: "The application indicated that all contaminated *wastewaters* were to be *conveyed through two above ground wooden tanks and then an onsite impoundment basin* (for treatment by soil filtration and solar evaporation and if necessary, chemical treatment) *prior to discharge to the river.*" [Source: Reichhold, Inc.]

B. Environmental Assessments and Site Investigations

25. First paragraph, second sentence: Reichhold actually manufactured adhesive products used in *plywood manufacturing*, not paper making. [Source: Reichhold, Inc. response to 104(e) request for information]
26. Third paragraph, after last sentence: Propose inserting as first sentence: "*The associated impoundment basin and wooden tanks were constructed but the outfall was not constructed since Reichhold began their move to the Tacoma site in 1956 and completed the move in 1958.*" [Source: Reichhold, Inc.]
27. Propose inserting following clarifying sentence after fourth paragraph: "*In 1986, the U.S. Army Corps of Engineers, Seattle District, evaluated the site under the Defense Environmental Restoration Program and concluded that no further action was necessary under this program.*" [Source: letter from Department of the Army to USEPA, 19 October 1987]
28. Sixth paragraph, second sentence: Note that the TCLP levels were all below TCLP regulatory thresholds.

29. Seventh paragraph, second sentence: It is more accurate to refer to the compounds as *phenols, formaldehyde*, and glues rather than phenolic compounds and formalin.
30. Eighth paragraph, first sentence: Note that the dredging occurred *in the area to the east of the existing dock*.
31. Twelfth paragraph, first sentence beginning "In April 1996:" This sentence states that results of additional soil and groundwater studies were sent to Reichhold and Lone Star. Who sent results of soil and groundwater studies to Reichhold and Lone Star?
32. Twelfth paragraph, second sentence: Area should be clarified as follows:
"High levels of dissolved arsenic were found at the *southern* portion of the site; near the former MST Chemical Inc. facility, *which was located on the northern portion of the adjoining property*. [Source: *Preliminary Feasibility Study*, RETEC, September 1996, pg. 2-13 and Figure 2-6]
33. Thirteenth paragraph, after last sentence: Additional information from the Remedial Activities Summary Report, "*Pentachlorophenol and arsenic concentrations in groundwater were substantially reduced by these treatments. After the treatment, pentachlorophenol was observed below MTCA Method C levels, except for one well at the Site. Significant reductions of arsenic groundwater concentrations were also noted in post-treatment sampling; however samples collected in 2003 reported concentrations that were observed above MTCA Method C levels for arsenic in groundwater within the treatment zone and one well at the Site outside the treatment zone.*" [Source: *Remedial Activities Summary Report*, Former Reichhold / Glacier Northwest Site, 5900 West Marginal Way S.W., Seattle, Washington, Shaw Environmental, Inc., April 2008]
34. Fourteenth paragraph, first sentence: For accuracy and completeness, this sentence should read: "*In 2001, Glacier Northwest planned to conduct a maintenance dredge of the river on the eastside of their dock to maintain required ship draft depths.*"
35. Second to last paragraph of Section B, first sentence beginning "In January 2005:" For accuracy and completeness, this sentence should read: "*In January 2005, the planned maintenance dredging and capping by Glacier Northwest on the eastern side of the dock began.*"

Contaminants

A. Chemicals used at site

36. Replace "phenolic compounds, formalin, and glues" with "*phenols, formaldehyde, urea, chlorine, and sodium hydroxide.*"

Historical Information

37. There are some noted inaccuracies in the historical ownership table. A clarified site ownership history, taken from Glacier Northwest's 104(e) response, is provided below:

Dates	Grantor	Grantee	Notes
9/12/03	Glacier Northwest, Inc	City of Seattle	Covenant
4/24/91-present			The current owner is now known as Glacier Northwest, Inc.
4/24/91	Lone Star Industries, Inc. and Onoda Northwest, Inc	Lone Star Northwest, Inc.	
4/12/91	Lone Star Northwest, general partnership	Lone Star Industries, Inc. and Onoda Northwest, Inc.	The Cement Terminal was leased to Ash Grove Cement -West, Inc. until July 1991
4/12/87	Kaiser Cement Corp	Lone Star Northwest, general partnership	In December 1987, Onoda Northwest, Inc. purchased a 50% interest in the general partnership The Cement Terminal was leased to Ash Grove Cement -West, Inc., beginning April 1987
1968	Port of Seattle	Kaiser Cement Corp.	

Lessee and Tenants

38. 1947 to 1961: Suggested more accurate description is provided: "The property was leased by Reichhold Chemical Co. from the U.S. Army from about 1947 to 1961, and manufactured adhesives and water-soluble glues used in plywood manufacturing dry plywood animal glue, urea formaldehyde resin and phenol formaldehyde resin. The Site also operated a pilot scale facility to produce pentachlorophenol and sodium pentachlorophenate used by the wood preserving

industry. Hydrochloric acid was produced as a by-product of the pilot-scale pentachlorophenol production. The hydrochloric acid was purified, stored in the onsite tank farms and sold as a chemical product." [Source: Reichhold, Inc.]

39. Third sentence: This sentence referring to "three disposal pits" should be deleted since it is based on inaccurate information which has since been corrected [Source: Letter from Dan Cargill to M. Anderson re: Reichhold Chemical Site (Ecology 1988) - Attachment C]
40. Since 1987, there have been miscellaneous leases of the undeveloped southern portion of the property, which have included a lumber yard, truck parking and equipment staging.

Corporate Information

41. Much of the corporate information regarding Glacier Northwest is incorrect, however only that which is publically available or not confidential business information will be addressed. The number of employees does not accurately reflect the number of employees at the site nor in the company. Annette Ware is not the CEO of the company. SIC Code 3531 does not apply to this facility; it is a code that applies to the manufacture of construction equipment and not, as the description suggests, the washing of the exterior of cement trucks.
42. Corporate Summary, first sentence: This statement is not accurate. As the third sentence correctly presents, Glacier Northwest operates concrete facilities and aggregate mines throughout western Washington and Oregon. Glacier Northwest does not manufacture asphalt.
43. Financial Information: The financial information presented in this summary is incorrect. Accurate financial data was produced to EPA under the protection of confidential business records. Unless otherwise publicly available, financial information of any kind about Glacier Northwest should be redacted from this document and not otherwise be made available to the public under a public disclosure request.

On behalf of Reichhold and Glacier Northwest, we appreciate the opportunity to provide comments and clarifications to the Glacier Site History. If EPA has questions, comments, or responses on the information provided in this letter, please do not hesitate to contact me at (503) 488-5014.

Sincerely,

A handwritten signature in black ink, appearing to read 'Erik C. Ipsen'.

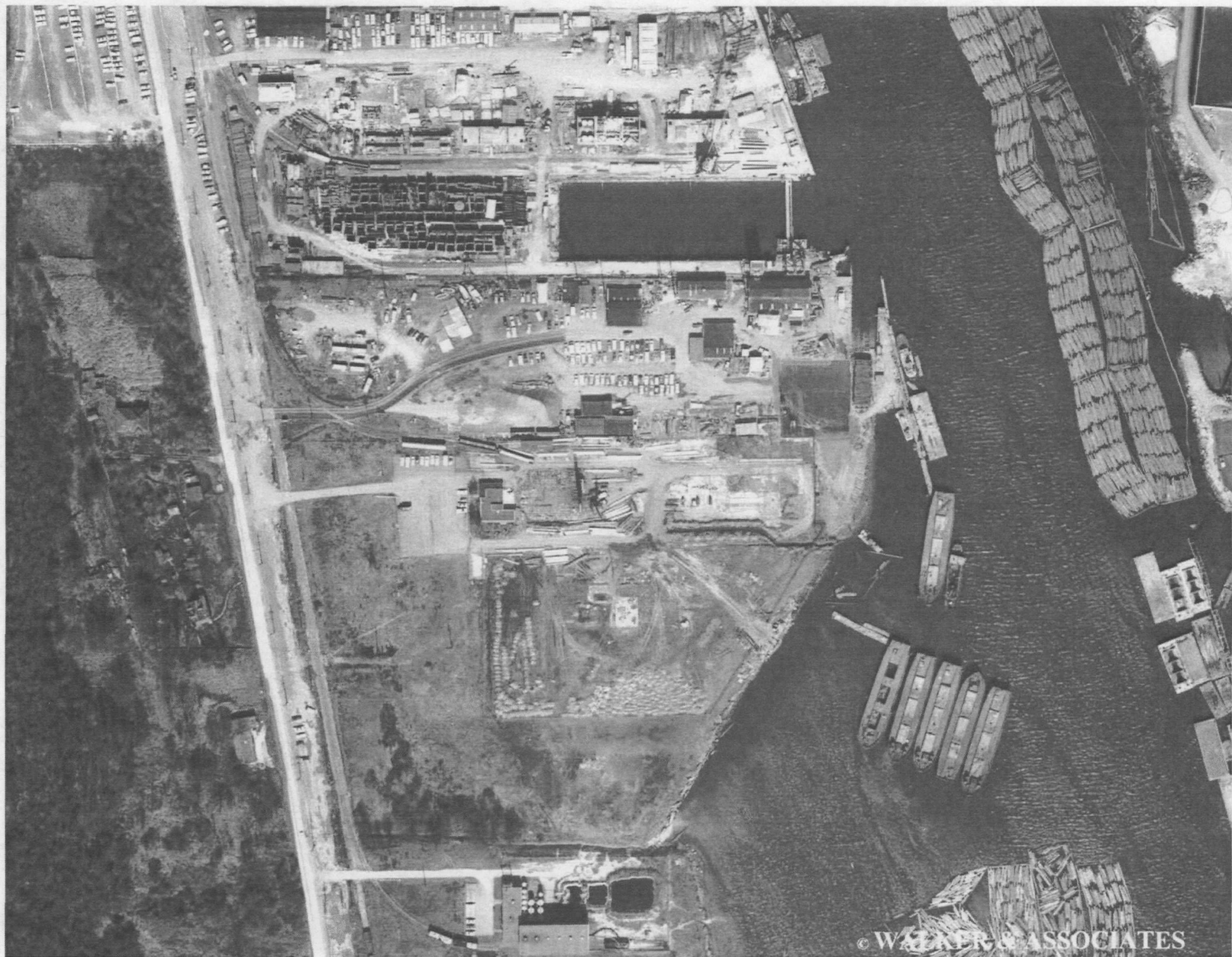
Erik C. Ipsen, P.E.

ECI/jjr/0091535

Attachments

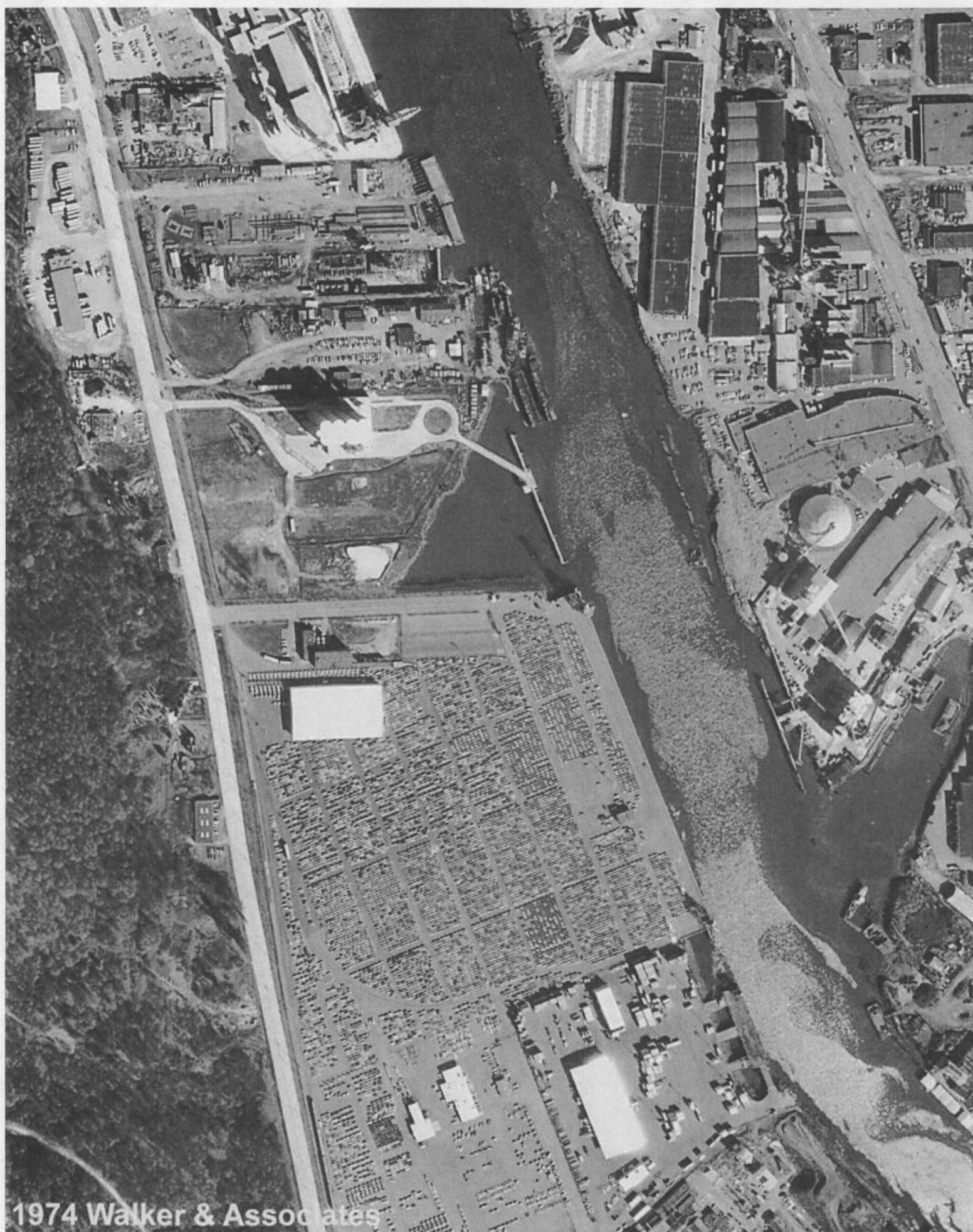
cc: Ms. Donna Ortiz de Anaya, Ecology
Mr. Dan Cargill, Ecology
Mr. John Oldham, Reichhold, Inc.
Ms. Shawn Lilley, Glacier Northwest, Inc.
Mr. Travis Exstrom, Perkins Coie
Mr. John Bjorkman, K&L Gates

Attachment A
Aerial Photographs





1969 Walker & Associates



1974 Walker & Associates

Attachment B
Memorandum from
Wallace Bergerson (State of
Washington Pollution Control
Commission), 8 January 1953

STATE OF WASHINGTON
POLLUTION CONTROL COMMISSION

INTER-OFFICE MEMORANDUM

DATE: January 8, 1953

TO: The Files

FROM: Wallace W. Bergerson

SUBJECT: Reichold Chemicals, 5900 W. Marginal Way, Seattle.

In response to a telephone call from Mr. Wintermute of the Fisheries Department on December 24, concerning complaint about the above company, Mr. Harold Warner, the plant manager, was contacted by telephone. He reported that the new ditch had been put in for draining the back part of their property. He readily admitted that they had lost some formaldehyde, but at that time they hadn't determined how much. The loss was stopped as soon as discovered, and should not recur.

The plant was closed on Friday, December 26. Mr. Ken Jones made an investigation at the plant on Monday, December 29, and reported that: "In preparing a tank to be moved, the contents of (HCHO) Formaldehyde were pumped to another storage tank. Since all the piping had been removed, a hose and pump were used to drain the tank. When the tank was empty, one of the workmen tossed the hose to the ground, failing to close the valve. As a result, about 8,000 gallons of formalin were siphoned from the storage tank into the drain ditch through the company property. The loss was discovered by the plant manager about 1:00 AM. This is an unusual occurrence since the plant has equipment and dikes for preventing losses."

The changes in the plant, attendant to the development of a new process for making formaldehyde, seem to have been a contributing cause to the accidental loss of formaldehyde.

The best available information on toxicity states that, "in a concentration of 10 ppm, formaldehyde had no apparent effect on rainbow trout in three days but 50 ppm killed them in one to three days. If they are given the chance to do so, during short time exposure, fish will avoid solutions containing 400 to 1600 ppm of formaldehyde, finding such solutions to be irritating."

Recurrence of this problem is not expected.

WWB/mb

cc Fisheries Dept.

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Attachment C
Letter from D. Cargill to
M. Anderson re: Reichhold
Chemical Site (Ecology 1988)



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

4350-150th Ave. N.E. • Redmond, Washington 98052-5301 • (206) 867-7000

April 25, 1988

Ms. Michele Anderson
U.S. Environmental Protection Agency
1200 Sixth Avenue M/S HW-113
Seattle, WA 98101

Re: Reichold Chemical Site

Dear Ms. Anderson:

I have reviewed the documents obtained from the Port of Seattle and the U.S. Army. I have also reviewed previously submitted materials and have the following comments:

The aerial survey of the Reichold Hazardous Waste site conducted by EPA actually evaluates what is now Terminal 115. Originally, the site was a sand and gravel pit with an adjacent lumber yard. The waste ponds mentioned in the various reports are, as far as I can ascertain, bermed areas used to dewater dredge spoils used to fill tide lands from the construction of Terminal 115. The actual Reichold site is approximately 2,000 feet north of the area for which the assessment was conducted. The 1974 photo shows an "unidentified chemical facility" at the northern portion of the "site". This facility was M&T Chemicals. The facility still conducts the same operation as in 1974, reclamation of metals from tin cans, and operates as MST Chemicals. MST Chemicals is south of the former Reichold property. (WDOE, NWRO files - MST Chemical permit file)

Due to reservations on the part of the Army, two 20,000 gallon wooden tanks were installed in lieu of the waste ponds. It also appears that a "control basin was installed which collected waste water from the formaldehyde plant and kettle room. (Reichold ltr of 10/19/55)

The control basin was located about 40 feet south of the main plant building. (Corps of Engineers Permit Application filed by Reichold, C.O.E. file NPSKS 800.6(Duwamish Wwy., Wn.)94/3, August 16, 1955). If the basin was actually located there, then the only borehole or well close to the control basin is B-8, done by Shannon & Wilson in 1966. All other boreholes and wells by Parametrix are upgradient and

Ms. Michele Anderson
April 25, 1988
page 2

south of the basin. This is not surprising since the assessment was for the "sale property" which comprises the southern portion of the plat, and south of the manufacturing area.

Enclosed is a copy of the analysis of the sediments adjacent to the current Lone Star pier. I discussed the data with Christopher Dewey, a chemist with the Eastside HazMat team. He believes that the compounds in the sediments are related to the activated charcoal facility run by the Army.

In the event this case is investigated further, I suggest that the following issues be examined:

- a. The Army facility contained both a control and experimental laboratory. What materials were used in experimenting with the plant's product?; where were they stored?; how was lab and manufacturing waste disposed of?; what was stored in the various tanks on site? Were they ever removed? Was the septic tank ever removed or does it serve as conduit for contaminants?
- b. Does the outfall constructed by Reichold still exist and is it used?
- c. Were any city permits required at the time for construction of the waste treating tanks, control basin and outfall structure? Do they provide as built drawings of what was installed?
- d. Is there any record of who the contractor for Kaiser was? Is the company still in operation? Are there any records in city or Port of Seattle files of demolition permits?

If you have any questions please do not hesitate to call me at 867-7023.

Sincerely,



Dan Cargill
District Inspector
Elliott Bay Action Team

DRC/drc
Enclosure